

Remarks

We note with appreciation the allowability of Claims 4, 9, 13, 15, 20, and 25. For the reasons set forth herein, we respectfully submit that all of the solicited claims are patentable over the cited prior art and are in proper condition for allowance.

We respectfully submit that solicited Claims 1-3, 5-8, 12, 14, 16-19, 21, 22-24, and 26-27 are patentable over Bianchi (U.S. Patent No. 5,434,617) in view of Watanabe et al. (U.S. Patent No. 5,694,625). Bianchi discloses an automatic tracking camera control system in which a separate spotting camera 110 provides a field of view of an object (101) to be tracked by another tracking camera 120. Computer 510 calculates the present movement of the object by digitizing the image received by spotting camera 110 and determining the pixel difference between the two images and determining the necessary movement of tracking camera 120.

In sharp contrast, the claimed invention is directed to a method for holding an object of interest in a field of view of a movable video camera by predicting a future position of the object based upon current position and movement parameters, determining a future position of the camera, and generating movement signals for the moveable camera.

As correctly acknowledged by the Examiner, the system disclosed in Bianchi does not predict any future movements of the object. Instead, the Bianchi system merely follows the detected object movement.

Watanabe et al., whether taken alone or in hypothetical combination with Bianchi, also fails to teach or suggest the claimed invention.

Watanabe discloses a camera automatic focus system in which the lens of the camera (not the camera itself) is moved in or out to focus on an object based upon the detection of the current focus by a focus detecting device. The focus detecting device is used to calculate a defocus amount, which is in turn used to predict the movement of the object and re-focus the lens. This is not the claimed invention, however. Watanabe does not track an object; it adjusts focus based upon the detected amount of lost focus due to object movement.

In sharp contrast to Watanabe et al., the claimed invention predicts the future position of the object based upon current position and movement parameters, determines a necessary future

position of the camera for tracking the object and then generates movement signals for the camera.

One of ordinary skill in the art would not be motivated to combine the tracking system of Bianchi with the automatic focus system of Watanabe et al., and then to further modify both of these systems to achieve a tracking system that determines future position of the camera based upon a prediction of the future position of the object, as the claimed invention. Neither reference teaches or suggests making such a predictive determination as to object tracking.

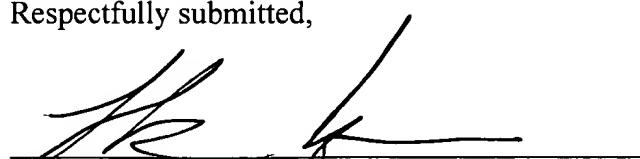
The tracking system of Bianchi uses a spotting camera with a stationary field of view for detecting the movement of object, and the computer calculates the movement of the tracking camera to track the object. Neither of the cited references suggests how the calculation of the defocus amount in Watanabe could be incorporated into the Bianchi system to eliminate the spotting camera, and also to determine the movement of the tracking camera. Nor is there any suggestion in the reference as to why one of ordinary skill in the art would somehow adapt a lens focusing system into an object tracking system.

Nor is there any suggestion as to why one of ordinary skill would make these modifications (without using the instant applications in hindsight). Accordingly, we respectfully request that the rejection under 35 U.S.C. 103(a) be withdrawn.

For the reasons set forth above, we respectfully submit that the solicited claims are in proper condition for allowance, which action is respectfully requested.

Respectfully submitted,

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